

Date: Wed, 26 Jan 94 10:08:23 PST
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>
Errors-To: Ham-Homebrew-Errors@UCSD.Edu
Reply-To: Ham-Homebrew@UCSD.Edu
Precedence: Bulk
Subject: Ham-Homebrew Digest V94 #10
To: Ham-Homebrew

Ham-Homebrew Digest Wed, 26 Jan 94 Volume 94 : Issue 10

Today's Topics:

 Antenna pre-amp design. Help!
 digital readout using freq counter? (3 msgs)
 ICF-2010: adding filter, mods? Help!
 mods for Sony ICF-2010 (2001D)?
 Power Supply Question
 want to build reciever for 108-137Mhz
 XTAL source needed

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>

Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Tue, 25 Jan 1994 11:12:02 GMT
From: qualcomm.com!vixen.cso.uiuc.edu!howland.reston.ans.net!newsserver.jvnc.net!
raffles.technet.sg!ntuix!ntuvax.ntu.ac.sg!asirene@network.ucsd.edu
Subject: Antenna pre-amp design. Help!
To: ham-homebrew@ucsd.edu

Hi,

 Can anyone here give me some advice on building an antenna pre-amp
for working 4 - 24 mHz? Should I go broadband or switched bands? What about
pre-filtering?

 What are the advantages of designing one around bi-polar or mosfet?
Can anyone contribute some tried and tested circuits for me to construct?

Tks.

73 de 9VG Daniel

Date: 25 Jan 94 16:14:14 GMT
From: auratek!epacyna@uunet.uu.net
Subject: digital readout using freq counter?
To: ham-homebrew@ucsd.edu

Pete

While your transmitting, your SSB or CW modulation will cause the frequency counter display to bounce around. It will only be readable on steady carrier. This method (sample output) also does not allow you to read your receive frequency.

A better method is to connect a counter to your VFO. Now you will also be able to constantly read receive and transmit frequency. Your fluke counter is not very appropriate however.

Each radio has a band plan (i.e. the relationships between the mixing process and resultant VFO, BFO, IF frequencies). Unless your radio has a 0 IF frequency, as in the case of direct conversion, the counter used will need to take into account whether it needs to count up or down, and be able to count from a pre-determined off-set determined from your radio's band plan. However, there are commercially built dials that do this, or you can build your own (reference Jan 1980 QST for construction article). The counter featured here can count up or down in frequency and has pre-settable decade counters.

The measurement principle is simple: the frequency of the VFO is counted and the frequency of the IF is added or subtracted from the VFO count (depending on the equipment frequency mixing scheme).

There is also a way to use your standard counter. This would involve building a mixer which would be installed between your VFO and counter. The mixing scheme could be selected to off-set the IF frequency etc..

These are the ways that you can read your equipment frequency, however it probably was not the answer you were hoping for.

73

Ed W1AAZ

Date: Tue, 25 Jan 1994 16:28:03 GMT
From: catfish!cscsun!dtiller@uunet.uu.net
Subject: digital readout using freq counter?
To: ham-homebrew@ucsd.edu

BRUNELLI_PC@delphi.com wrote:

:
: I use a ten-tec triton and have a fluke freq counter. I am trying to find a
: an easy way to get a stable spot of my transmitting freq from the counter
: without tapping the transmission line. should i build a line sampler,
: tap the if in some way, or just forget it!!!???
:
: thanks
:
: pete n1qdq

Most likely you could wrap a few turns of wire around the feedline and
use that as a little antenna for the freq counter. Mine's sensitive
enough to read the freq. Does the triton have a low level RF output?
My FT-102 has a +/- 1mW output that'll do just dandy.

--

David Tiller	Network Administrator	Voice: (804) 752-7373	
dtiller@rmc.edu	Randolph-Macon College	Fax: (804) 752-7231	
n2kau@wa4ong.va.usa.na	P.O. Box 5005	This space for rent.	
ICBM: 37 45N 77 45W	Ashland, Va 23005		

Date: Wed, 26 Jan 1994 03:47:44 GMT
From: agate!howland.reston.ans.net!cs.utexas.edu!swrinde!sgiblab!barrnet.net!
netnews.synoptics.com!news@network.ucsd.edu
Subject: digital readout using freq counter?
To: ham-homebrew@ucsd.edu

In article Foq@synoptics.com, jkaidor@synoptics.com (Jerome Kaidor) writes:

>In article 1214@auratek.COM, epacyna@auratek.COM (Edward Pacyna) writes:

>>

>>The measurement principle is simple: the frequency of the VFO is counted and
>>the frequency of the IF is added or subtracted from the VFO count

>

>**** Here's another way. You can use pre-settable counters, and instead of
>presetting them to zero, you preset them to the two's complement

**** Oops, did I say 2's complement? I meant nines-complement, of course,
since one builds such counts in BCD form.

- Jerry Kf6vb

Date: Wed, 26 Jan 1994 10:29:39 GMT
From: sdd.hp.com!sgiblab!swrinde!cs.utexas.edu!howland.reston.ans.net!
newsserver.jvnc.net!raffles.technet.sg!ntuix!ntuvax.ntu.ac.sg!
asirene@decwrl.dec.com
Subject: ICF-2010: adding filter, mods? Help!
To: ham-homebrew@ucsd.edu

Hi,

Can anyone tell me how to change the narrow and wide IF filter inside the ICF-2010? What kinds of filter can I use? Can I use filters for say the ICOM (FL-series) or Kenwood. 1) Will these work, 2) Will these fit? I heard of the Kiwa filters for the 2010 too.

In general what kind of improvement can I expect out of using such filters?

Can someone direct me to any sites where I can find out what kinds of mods are available for the Sony ICF-2010/2001D? Tks.

73 de 9VG Daniel

Date: Tue, 25 Jan 1994 14:58:11 GMT
From: pacbell.com!uop!lll-winken.llnl.gov!sol.ctr.columbia.edu!
howland.reston.ans.net!newsserver.jvnc.net!raffles.technet.sg!ntuix!
ntuvax.ntu.ac.sg!asirene@network.ucsd.edu
Subject: mods for Sony ICF-2010 (2001D)?
To: ham-homebrew@ucsd.edu

Hi,

Does anyone have any mods for the Sony ICF-2010 (or 2001D)?

I am also interested in adding a narrower IF filter to the radio for SSB modes, any suggestions?

73 de 9VG Daniel

Date: Tue, 25 Jan 1994 20:41:49 GMT
From: news.cerf.net!pagesat.net!olivea!sgigate.sgi.com!sgiblab!sdd.hp.com!
col.hp.com!srngenprp!alanb@network.ucsd.edu
Subject: Power Supply Question

To: ham-homebrew@ucsd.edu

Gary Coffman (gary@ke4zv.atl.ga.us) wrote:

: I've faced this problem many times over the years. It seems that 24
: and 48(CT) volt transformers are a lot more common than the 16 or 32(CT)
: volt transformers you want for a pass regulated 13.8 volt supply. The
: way I solve it is with a switching pre-regulator working on the primary
: side of the transformer. ...

: Of course there is another alternative. Open up the transformer and
: remove enough turns on the secondary winding to get the voltage down
: to the desired value.

Another alternative is to insert a low-voltage winding in series with
the primary to reduce the effective primary voltage. If there are two
24-volt windings on the same transformer, for example, just wire one
in series with the primary to reduce the primary voltage by about
20 volts. That will give you 20 volts on the other "24V" winding.

If you don't have a second winding, you can use a second transformer.
It doesn't need to be high-power since its secondary only needs to pass
the primary current of the main transformer. (Primary current =
slightly more than secondary current times $[V_{\text{secondary}} / V_{\text{primary}}]$.)
You'll have to experiment to get the winding polarity correct, since
phasing is rarely marked.

AL N1AL

Date: Tue, 25 Jan 1994 13:34:58 GMT
From: pacbell.com!uop!lll-winken.llnl.gov!sol.ctr.columbia.edu!
howland.reston.ans.net!newsserver.jvnc.net!raffles.technet.sg!ntuix!
ntuvax.ntu.ac.sg!asirene@network.ucsd.edu
Subject: want to build reciever for 108-137Mhz
To: ham-homebrew@ucsd.edu

In article <2i1fki\$cmb@vixen.cso.uiuc.edu>, berthec@osiris.cso.uiuc.edu (Chad Berthelson) writes:

> As the subject line says, I want a tunable receiver that will pick
> up Air Bands (108-137 Mhz). I don't need anything fancy, but I
> don't have much to go on. What would this entail, it can be rough
> but needs to be cheaper than buying a \$100 scanner with the same
> capabilities (except lot's fancier). I had (as a kid) a radio
> shack kit that built an AM receiver, is that pretty close to what
> I have to do to pick up these higher freq's? I figure some of you
> guy's would know. If you know of a book that would tell me what

> I need, that would work fine. thanks in advance....

Depending on your taste, here's a pretty simple solution. Get yourself one of those cheap made in the Far East FM broadcast radios. Now when you open these sets you will normally see one or two small coils of enamel coated wire, especially near the tuning capacitor. As you move your finger near one of these coils, you will find that the radio detunes. That coil is the mixer oscillator coil. What you need to do now is to gently pry the windings apart so that the spacing is greater now. Step two is to indentify the trimmers behind the big tuning capacitor. Usually such small radios are AM/FM. Behind the tuning capacitor you usually find 4 trimmers. 2 are related to AM and 1 is for the FM coarse tuning and another for the telescopic antenna matching. I leave it to you to experiment. The coarse tuning will have the effect of changing the tuning range, you should turn this so that both the plates are visible to you. The antenna trimmer is for you to adjust for best reception. What you can do is tune to any FM station, see which trimmer detunes it, that is probably the coarse tuning. Finally, look for a light blue IF transformer can. This is sometimes white but it is the discriminator transformer. Turn this slowly until the white noise (the hissing) becomes loudest. This is necessary so that the AM reception is clearer since most FM also has some AM ability. Now tune to some station in about 124 MHz (you go figure that out yourself). When the transmission comes on. Tune the antenna for best reception. There is ANOTHER coil on board which is normally close to a bunch of capacitor and one transistor. This is the RF amplifier section. You can also stretch the coil a little to get better gain at Air-band.

There you go. A cheap (\$5 or so) but working Air-band monitor. Of course you don't get digital display or memory scanning but what do you expect :)

Have fun. 73 de 9VG Daniel

>

>

> Chad Berthelson

> k

> --

> Chad R. Berthelson Navy Public Works Center

> Environmental Engineer 310 John Tower Rd.

> berthec@osiris.cso.uiuc.edu Naval Air Station

> (904) 452-4728 (work) Pensacola, FL 32508-5303

Date: Tue, 25 Jan 1994 18:21:42 GMT
From: sdd.hp.com!cs.utexas.edu!swrinde!elroy.jpl.nasa.gov!newncar!csn!server!
stortek.com!patrick_tatro@decwrl.dec.com
Subject: XTAL source needed
To: ham-homebrew@ucsd.edu

Im looking for a vendor willing to supply crystals in the 1 or 2 quantity
basis. Most vendors have minimum quantities that far exceed my needs. I am
also not sure if I can locate crystals at 16.660Mhz and 16.600Mhz. Im trying
to convert an FM pocket tranciever into a cordless phone unit. Any help will
be greatly appreciated.

73's
Pat Tatro N0WCG

Date: 25 Jan 94 07:08:42 GMT
From: amd!amdahl!JUTS!p1dbg02!dws30@decwrl.dec.com
To: ham-homebrew@ucsd.edu

References <2hjke1\$7v7@apakabar.cc.columbia.edu>,
<16fT02SH5bd501@JUTS.ccc.amdahl.com>, <arog.759386054@BIX.com>mda
Subject : Re: IBM-PC Shareware for PCB Photo work

I have herd that Easytrax may be FTP'd but don't know where. There was
some talk on sci.electronics. I think I saw it on JDR Microdevices BBS
as well. Sorry I can't be of more help. The program is worth the
effort in getting though.

--

Dave Sharpe Sunnyvale Ca. DWS30@duts.ccc.amdahl.com

End of Ham-Homebrew Digest V94 #10
